



## SUMMIT DAY ONE

Wednesday, April 27, 2016

7:00-8:00 Registration and Continental Breakfast

8:00-8:15 Opening Remarks by Summit Chair (Day One)

**Jim Cantrell**, *President and Chief Executive Officer*, STRATSPACE

8:15-8:45 *Keynote Address*

**Walter Scott**, *Executive Vice President and Chief Technical Officer*, DIGITALGLOBE

8:45-9:15 **Presentation: Space 2.0 Partnering and Funding Score-Card**

This presentation will provide a market overview and updates on investments, joint ventures and acquisitions, government policy changes and government funding into Space 2.0 and related projects.

**Carissa Christensen**, *Managing Partner*, THE TAURI GROUP

9:15-10:30 **Keynote Panel Discussion: Orbital Answers to Earth-Bound Mega-Trends – Driving New Kinds of Partnerships**

This panel will showcase a cross-section of strategy and innovation leaders across different end-markets/verticals, exploring the multiple ways in which each firm leverages some aspect of space or will impact one or more aspect of the orbital business. Panelists will explore:

- \* How orbital infrastructure acts as an enabler to help solve earth-bound challenges and opportunities
- \* To what degree space exploration and exploitation may in itself be a future market opportunity
- \* To what degree and how their various space-related projects and initiatives are structured or integrated
- \* How they are working with outside Space 2.0 startups or the incumbent space industry

- \* What kind of new partnerships or relationships they may be seeking – are they willing to make venture investments through a corporate venture office, for example?
- \* And what kinds of services or capabilities they are looking for from those relationships?

Moderator:

**Ioana Cozmuta, Ph.D.**, *Industry Innovation and Microgravity Lead, Space Portal, NASA AMES RESEARCH CENTER*

Panelists:

**David A. Anhalt**, *Vice President and General Manager, IRIDIUM PRIME*

**Jeff Demain**, *Business Development Director, INTEL CORPORATION*

**Riccardo Di Blasio**, *Chief Operations Officer, COHESITY*

**Eng Lim Goh**, *Chief Technology Officer, SGI*

**Laguduva Kubendran**, *Commercial Partners Portfolio Executive, NASA HEADQUARTERS*

**Bernard Kutter**, *Manager Advanced Programs, UNITED LAUNCH ALLIANCE*

**Yael Villa**, *Vice President Security and Jerusalem Site Leader, CISCO*

10:30-11:00      Networking Break

11:00-12:15      **Panel Discussion: Rebooting the Economics of Space – Risk, ROI & Vision**

Until recently, space was widely perceived as the mildly profitable terrain of very large established aerospace and defense contractors and their supporting supplier bases. Commercial telecommunications and government-related space businesses have seen few dramatic changes for decades. But now, the widespread passion for space has been matched by real investments, from a few wealthy individuals, and over half a billion dollars flowing more widely into space startups from angels and VCs. Investments have been focused in the US, but international activities are also on the rise. Meanwhile NASA has demonstrated a new role by purchasing commercial launch and transportation services, advancing infrastructure that supports purely commercial ventures while providing more predictable demand. Other government entities are also beginning programs to buy commercial services, helping to shift further the risk/reward/timeline calculus for private funders. Space investors are looking for more exits to justify additional investments. Non-traditional space companies and new venture-type entities within traditional aerospace could play a role. Panelists here will represent a cross-section of funding sources, from early and late stage VC to equity to corporate strategic venture groups, dissecting the latest developments, industry strategy and long-term visions.

Moderator:

**Van Espahbodi**, *Co-Founder, STARBURST ACCELERATOR*

Panelists:

**Robert R. Cleave**, *Vice President for Advanced Programs and Investments, LOCKHEED MARTIN*

**Shahin Farshchi**, *Partner, LUX CAPITAL*

**Steve Goldberg**, *Operating Partner, VENROCK*

**Dr. Ray O. Johnson**, *Executive in Residence*, BESSEMER VENTURE PARTNERS  
**Gareth Keane**, *Investment Manager*, QUALCOMM VENTURES  
**Nic Volpi**, *Partner*, PERMIRA ADVISERS

12:15-1:45 Group Luncheon Sponsored by:



1:45-2:15 **Presentation: The Information Value Chain – Why Space, and What’s in it for Silicon Valley?**

Gone are the days of defense dominated aerospace. Innovation is in all aspects of our lives and it's global. Business models are even more dynamic with new eco-partners emerging to keep up with "street-demanded" growth objectives. Affordable access to space offers a set of new disruptive vectors. The ability to move large volumes of data expediently and securely coupled with earth imagery and open source media afford new and improved value propositions. How do these innovations change the competitive landscape? What new opportunities are afforded? How are businesses reacting and anticipating their next moves? What new eco-partners are emerging and why?

**Lesley Foster**, *Director, Commercial Information as a Service*, RAYTHEON

2:15-3:30 **Panel Discussion: Staying Ahead of Zettabyte Demand – Strategies & Innovation in Communications Services from Orbit**

This panel will feature senior business development officers from established satellite owner/operators, and CEOs of new(er) entrants, discussing questions such as:

- \* How do the projections look from analysts for the various big subsets of comms – streaming video, Wi-Fi & cloud backhaul, locational/tracking, etc.?
- \* Which fleets are going up when, how big are they, which markets are they serving, where will there be gaps, where will there be redundancies?
- \* How will the economics change with so much competition - or is there enough room for everyone to differentiate?
- \* ITU/frequency conflicts
- \* What satellite size formats fit this market best?
- \* Enhancements to existing HTS satellites vs. need for new constellations
- \* The debate over latency
- \* ITAR limits on providing satellites to foreign nations
- \* Prospects for in-orbit servicing and even manufacture

Moderator:

**Carissa Christensen**, *Managing Partner*, THE TAURI GROUP

Panelists:

**Skot Butler**, *Vice President, Satellite Networks and Space Services*, INTELSAT GENERAL CORPORATION

**Vern Fotheringham**, *Executive Chairman*, V-SATCAST, LLC

**Emmanuel Sauzay**, *Director, Commercial Space*, AIRBUS DEFENSE AND SPACE INC.

3:30-4:00      Networking Break Sponsored by:



4:00-4:30      **Presentation: 'Narrow Band' Satellite Application**

A number of existing and new satellite operators are targeting the M2M and Internet of Things market, in some cases as their primary application. This presentation will highlight projections for IoT and the potential impact of brand new disruptive trends such as connected/autonomous vehicles.

How does the business model work for M2M applications?

- \* Will most M2M business be funneled through secondary web/cloud service providers, or be direct to large corporate users?
- \* What are the subcategories of M2M/IoT communication needs, do they require different technical capabilities from the satellites?

**Matthias Spott**, *Founder and Chief Executive Officer*, EIGHTYLEO HOLDING GMBH

4:30-5:00      **Presentation: The Emergence of the Geo-Analytics Marketplace**

There are decision-makers in virtually every Fortune 500 company who could benefit from insights derived from satellite imagery, but most of them have never heard of a shape file or ordered anything by the square kilometer. To reach these customers the new space supply chain will need to extend to offering data products that are priced by their value to the user -- not by the raw number of pixels required to create them. Many of these data products will result from the synthesis of imagery from multiple satellite constellations, multiple spectral bands, imagery from low-flying UAVs, and the integration of non-image data such as temperature, rainfall, or IoT data. This presentation will survey the players and capabilities in this rapidly emerging segment, estimated at around \$30 Billion annually over coming years.

**James Crawford**, *Chief Executive Officer*, ORBITAL INSIGHT

5:00              Summit Day One Adjourns

5:00-5:05      Welcoming Remarks by Reception Host

**Eric Toldi**, *Chair*, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS, SAN FRANCISCO (AIAA)

5:05-6:05      Networking Reception Sponsored by:



## SUMMIT DAY TWO

Thursday, April 28, 2016

7:00-7:45 Continental Breakfast

7:45-8:00 Opening Remarks by Summit Chair (Day Two)

**Eric Anderson**, *President*, AND ONE TECHNOLOGIES

8:00-8:30 **Presentation: A Venture Perspective on Space2.0 Business Models Beyond Launch and Satellite**

**Sunil Nagaraj**, *Vice President*, BESSEMER VENTURE PARTNERS

8:30-9:30 **Panel Discussion: New Horizons, New Business Models, New Geospatial Knowledge Products**

This panel will reprise some of the players and themes of the Pre-Summit Earth Pixels but take the discussion more to the level of business models, partnering and finance. The panel will feature new geospatial constellations as well as more established participants actively licensing data to new partners or otherwise interacting creatively with the Space 2.0 entrants.

Moderator:

**Jeremy Conrad**, *Founding Partner*, LEMNOS LABS

Panelists:

**Chris Biddy**, *Chief Executive Officer*, ASTRO DIGITAL

**Richard Chmiel**, *Chief Executive Officer*, RS METRICS

**Joseph D. Fagnoli**, *Chief Executive Officer*, RITRE CORPORATION

**Jolyon D. Thurgood**, *Vice President, Corporate Development and Marketing*, HERA SYSTEMS, INC.

9:30-10:00 Networking Break

10:00-10:45 **Panel Discussion: Near-Term & Medium Term Launch Alternatives**

BlueOrigin's recent successful landing of a booster rocket was yet another milestone in the Space 2.0 story. Later this year, we may see launches by Rocket Lab and Virgin Galactic who intend to deliver their first payloads. Meanwhile ULA announced a dedicated payload format for cubesats and free rides for university cubesats. NASA recently awarded development contracts to Firefly, Masten, Generation Orbit and other innovative launch platforms, while BAE invested \$30 million in Reaction Engines for a horizontal takeoff spaceplane. This panel will feature a mix of newer launch entrants and established companies to discuss the growing diversity for launch.

Moderator:

**Robert Jacobson**, *Co-Founder and Co-Managing Partner*, DESERT SKY HOLDINGS LLC

Panelists:

**Gary C. Hudson**, *President and Trustee*, SPACE STUDIES INSTITUTE

**Garrett Katzenstein**, *Vice President of Product and Mission Management*, ROCKET LAB

**Sean Mahoney**, *Chief Executive Officer*, MASTEN SPACE SYSTEMS

**Dr. Miles Palmer**, *Co-Founder and Chairman*, 8 RIVERS CAPITAL

10:45-12:00 ***Closing Panel Discussion: Federal Support for Space 2.0 and the Evolution of Policy and Regulations***

This panel will feature a mix of government officials and government interface decision-makers from one AeroDefense giant and one Space 2.0 leader.

- \* ITAR restrictions on satellite export – limiting US firms ability to compete for foreign satellite contracts
- \* Implications of the space resource harvesting bill
- \* NASA's engagement strategy with Space 2.0: innovation interfaces at the Centers, & recent funding/contracting programs ("Tipping Point" etc)
- \* NGIA and NOAA rethinking their policies on use of privately generated geospatial data streams, opening them up to working with new providers
- \* FAA oversight on manned launches

Moderator:

**John P. Janka**, *Partner*, LATHAM & WATKINS, LLP

Panelists:

**Tony Freeman**, *Manager, Innovation Foundry*, JET PROPULSION LABORATORY

**Richard T. French**, *Staff Technologist, Space Technology Mission Directorate (STMD)*, NASA HEADQUARTERS

**Charles E. Miller**, *President*, NEXGEN SPACE LLC

**Bruce Pittman**, *Chief System Engineer*, NASA SPACE PORTAL/WYLE

12:00 Summit Day Two Adjourns